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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,308	01/17/2002	Tetsuya Uda	16869P-036400US	8406
20350	7590	08/25/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			BELLO, AGUSTIN	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,308

Applicant(s)

UDA ET AL.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14,15 and 17-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14,15 and 17-29 is/are rejected.
- 7) ☒ Claim(s) 30-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14-15 and 17-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hainberger (U.S. Patent No. 6,856,453).

Regarding claim 14, 17, 19, and 21, Hainberger teaches receiving a transmitted signal at one of the relay stations as a received signal (reference numeral 10 in Figure 8); separating the received signal into a plurality of bands (reference numeral 31 in Figure 8), adjusting each band to produce a plurality of adjusted bands (via reference numerals 33-41 in Figure 8), including at least one of amplifying optical signals (via reference numerals 33, 38, 39 in Figure 8) comprising each band in accordance with predetermined optical intensity parameters (reference numeral 12, 13 in Figure 8; paragraph [0091]) and adjusting a gain tilt of each band in accordance with predetermined gain tilt parameters (Figure 5); combining the adjusted bands to produce a transmission signal (reference numeral 41 in Figure 8); transmitting the transmission signal to a second relay station (Figure 7) or to the receiving station; and repeating the above steps at one or more of the relay stations, wherein the optical intensity parameters and gain tilt parameters are calculated based on a deviation of optical signal-to-noise ratios (OSNR) degradation caused by Stimulated Raman Scattering (SRS) (e.g. via CPU and EEPROM of Figure 8).

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Regarding claim 15 and 22, Hainberger teaches that the optical intensity parameters and the gain tilt parameters are determined based on transmission characteristics of all spans of optical fiber disposed between the sending station, the relay stations, and the receiving station (paragraph [0091]).

Regarding claim 18, Hainberger teaches determining SRS-induced variations further includes computing a sum of signal intensities as they occur at a transmitting end of the span for all wavelength bands which comprise the optical signal (reference numeral 12, 13 in Figure 8; Figure 11).

Regarding claim 20, Hainberger teaches a data store (reference numeral 13 in Figure 8, 11) configured to store the gain tilt parameters and the optical intensity parameters, the data store operatively coupled to the optical circuits to provide the optical intensity parameters and the gain tilt parameters.

Regarding claims 27-29, Hainberger teaches that the OSNR degradation is calculated for optical signals to be received at the second relay station or the receiving station (e.g. the next relay station or the receiving station at the end of the line).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hainberger in view of Chbat (U.S. Patent No. 6,810,214).

Regarding claims 23-26, Hainberger differs from the claimed invention in that Hainberger fails to specifically teach a gain tilt controller comprising an optical filter that is wavelength dependent with regard to light transmission characteristics. However, Chbat, in the same field of multiplexed optical communication, teaches a gain tilt controller comprising an optical filter that is wavelength dependent with regard to light transmission characteristics. One skilled in the art would have been motivated to employ a gain tilt controller comprising an optical filter that is wavelength dependent with regard to light transmission characteristics in order to allow the introduction of a negative gain tilt into at least the lower band signal (column 11 lines 9-20 of Chbat). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ a gain tilt controller comprising an optical filter that is wavelength dependent with regard to light transmission characteristics in the system of Hainberger as taught by Chbat.

Response to Arguments

5. Applicant's arguments filed 6/6/06 have been fully considered but they are not persuasive. As noted above, the examiner believes Hainberger teaches the newly recited limitations of the claimed invention.

6. Applicant's arguments filed 11/18/05 have been fully considered but they are not persuasive. The examiner maintains that the Hainberger teaches predetermined optical intensity parameters (reference numeral 12, 13 in Figure 8; paragraph [0091]).

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., feed-forward control) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Allowable Subject Matter

8. Claims 30-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB


AGUSTIN BELLO
PRIMARY EXAMINER